Math 9 Assignment #12 Due Date: \_\_\_\_\_\_\_\_\_\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_

Mark \_\_\_\_\_\_ / 36

**Directions**: All questions must be completed on loose leaf. A calculator is allowed. Please reduce any fractions to lowest terms. Place a box around your final answer. **ALL WORK MUST BE SHOWN FOR FULL VALUE.**

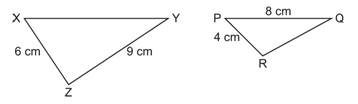
**Part A: Please answer all questions. /12**

1. Evaluate. 2 marks each

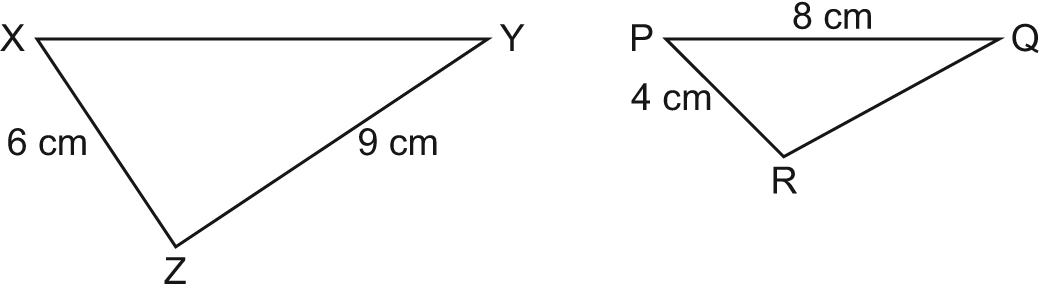
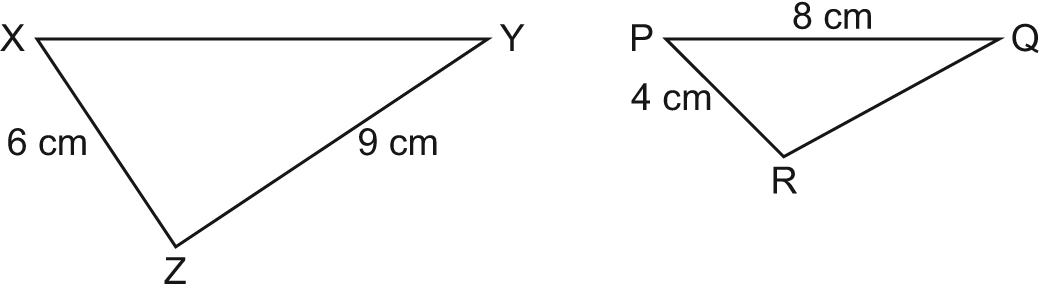
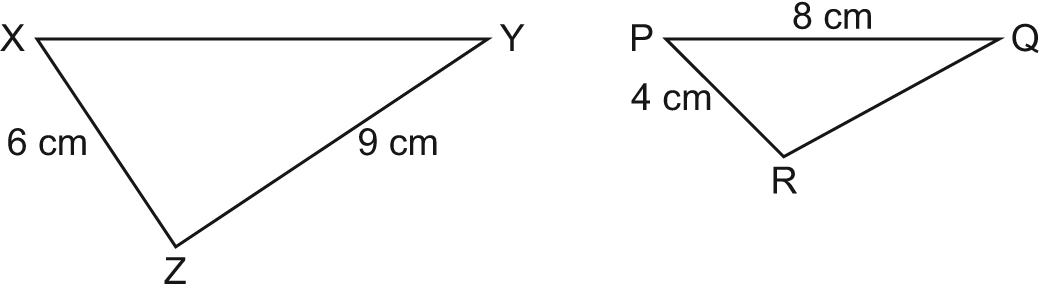
a) 24 – 3 + 12 ÷ 4 = b) 7(-4)(12) = c) (53 – 42)0 – (62 – 80) =

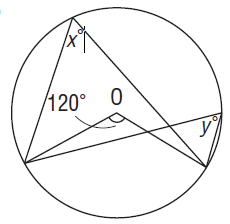
(-64) ÷ (7 – 3) 64 ÷ 2³

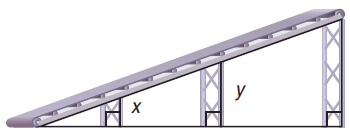
1. Solve the following inequalities. 2 marks each
2.  b) 
3. Find the missing sides XY and QR. 2 marks



**Part B: Please answer all questions. 3 marks each /12**

1. Johnny Boy says he can find the centre of a circle using only 2 chords of any length. Girly Girl says she can do the same by using 2 tangents. Who is right? Explain your answer and provide a drawing for each person showing its work.

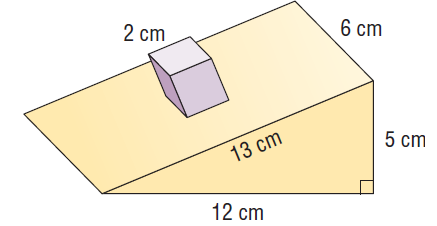


1. Find the value of *x* and *y* and explain how you found them.
2. Brandon is building a snowboarding ramp in his backyard. Find the length of each support beam.

8m

2m 3m 4m

1. Find the total surface area of the following shape.

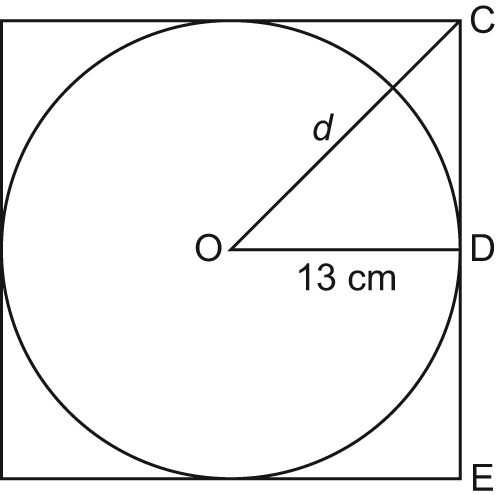


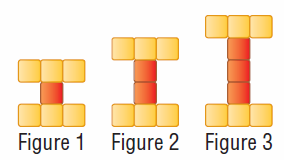
**Part C: Complete question 1 and choose any 2 of the remaining 3 questions.**

**4 marks each /12**

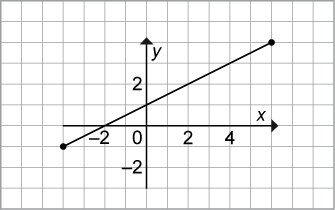
1. Solve:  

( If a fraction – then leave in fraction form)

1. A circular plate fits perfectly inside a square box. Finds the distance,d, that separate the centre of the plate to the corner of the box and the perimeter of the box.



1. Look at the following sequence.
2. Describe the pattern in words.
3. Write an equation representing the situation.
4. How many blocks will be necessary to complete figure 10?
5. You have 100 blocks, how many fully completed figures would you be able to built?



1. The following graph represents a linear relation.

Find the value of x when:

1. y = 1
2. y = 3

Find the value of y when:

1. x = -6
2. x = 8